

# Salmon Creek Basin Plan Public Meeting

March 11, 2004

6:30 – 8:30 PM

Shorewood Elementary School

2725 SW 116<sup>th</sup>

Burien, WA 98146

# Agenda

6:30 – 6:45 Registration, pick up materials

6:45 – 8:00 Presentation

8:00 – 8:30 Questions

# Project Management Team

City of Burien •Steve Clark •Dan Bath	King County •Curt Crawford
City of Normandy Park •Steve Bennett •Roger Kuykendall	Port of Seattle •Bob Duffner
City of SeaTac •Dale Schroeder •Don Monaghan	WSDOT •Mehrdad Moini

# Purpose of this meeting

- Update of activities
- Present draft basin plan goals
- Discuss technical options to meet goals
- Answer questions and solicit your comments

# Update of activities

- Recap of last meeting
- Further goal definition
- Hydrologic modeling
- Identification of projects

# Guidelines for basin plan goals

- Must meet Clean Water Act requirements
  - Maintain “existing” uses (November 1975)
  - Restore “existing” uses
  - Achieve applicable water quality standards
- Must meet Endangered Species Act requirements
  - None now, but future listings could include Salmon Creek

# Draft basin plan goals from last meeting

- Increase fish usage
- Improve water quality in the stream, upper basin, and in flows discharging from the bypass line
- Control flooding and hazardous erosion in the stream and throughout the basin

# Revised Draft Basin Plan Goals

## Salmon Creek Basin Goal -- Clean Water Act Compliance

*The designated uses of Salmon Creek in existence as of November 1975 shall be maintained or, if necessary, restored. These designated uses include salmon and trout spawning, core rearing, and migration; extraordinary primary contact recreation; domestic, industrial, and agricultural water supply; stock watering; wildlife habitat; harvesting; commerce and navigation; boating; and aesthetic values. In addition, applicable water quality standards shall be met.*

Specific management goals for Flow Regime, Water Quality, and Habitat are on the next three slides.



# Revised Draft Basin Plan

## Flow Regime Goals

### Flow Regime Goals

- *Maintain the current flow regime in Salmon Creek by continuing to use the by-pass line to approximate the flow regime expected under a land coverage of 75% forest, 15% grass, and 10% impervious area.*
- *Reduce flooding in the upper watershed.*

# Revised Draft Basin Plan

## Water Quality Goals

### Water Quality Goals

- Improve existing water quality by reducing pollutants in storm water run-off. In highly developed areas where metal pollution is likely to be a problem, achieve 50% removal of total zinc and 80% removal of total suspended solids. In less intensively developed areas where metal pollution is less likely to occur, achieve 80% removal of total suspended solids.*
- Reduce phosphorus and fecal coliform levels in Lake Hicks so that water quality standards are met.*

# Revised Draft Basin Plan

## Habitat Goals

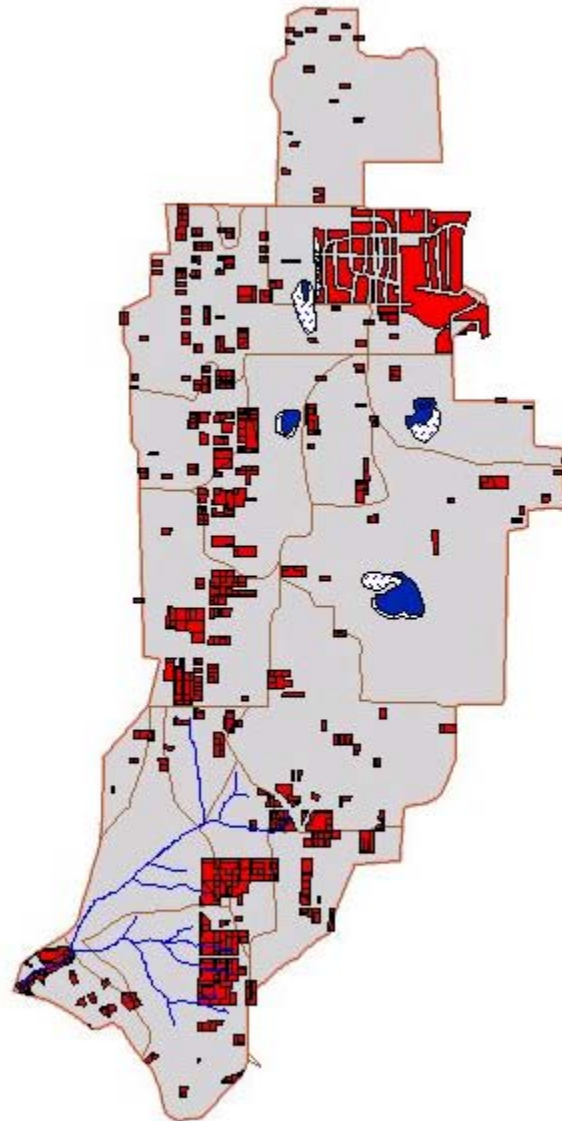
### Habitat Goals

- *Protect existing areas of good habitat*
- *Improve degraded habitat over time as funding is available*

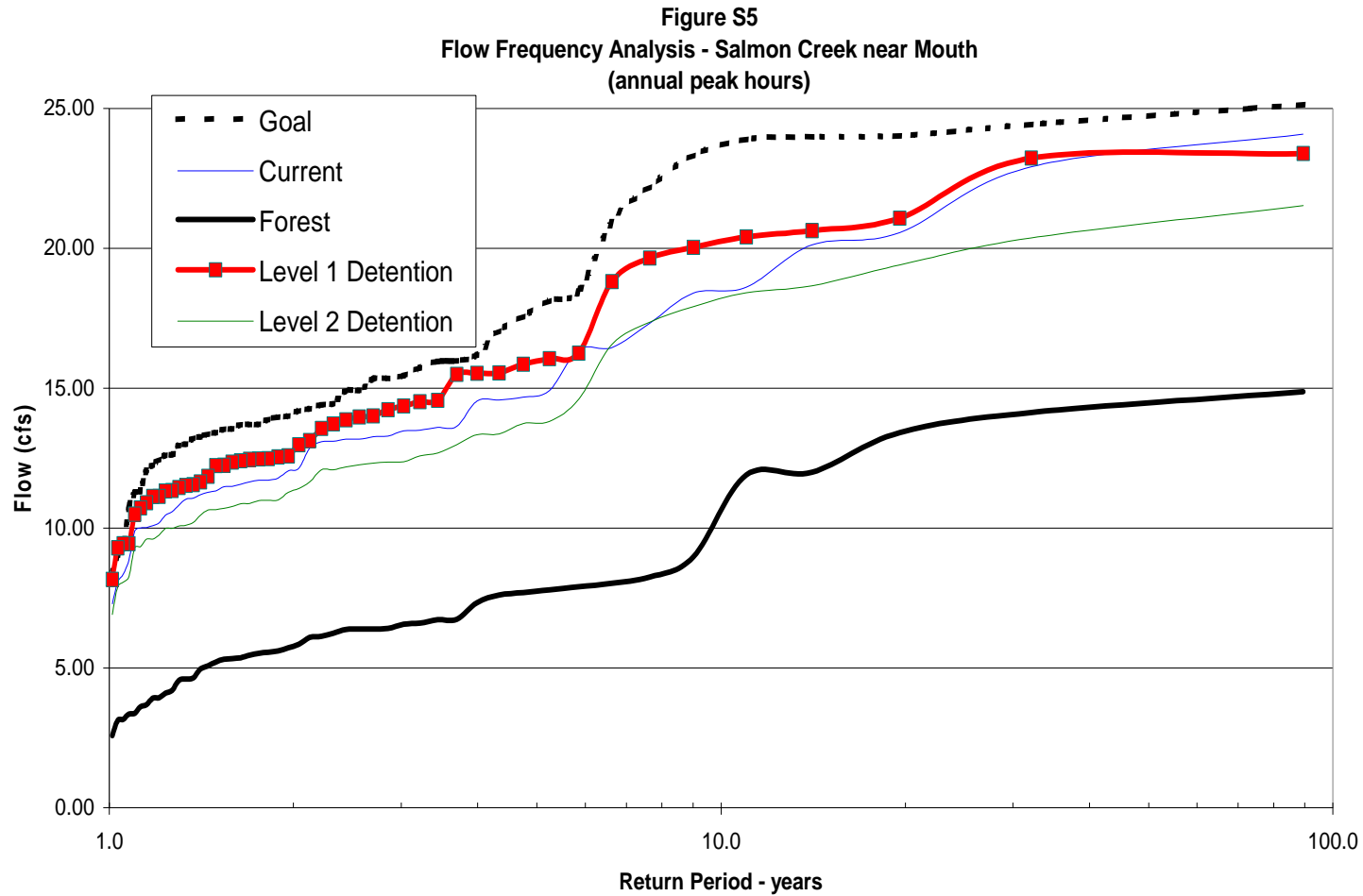
# Technical options to meet goals

- Flow regime options
- Water quality options
- Habitat options
- Monitoring and stewardship options

Salmon Basin Parcels Likely to be  
Developed or Re-developed (red  
parcels)



# Comparison of flow regulations



# Salmon Creek Flow Regime Technical Options

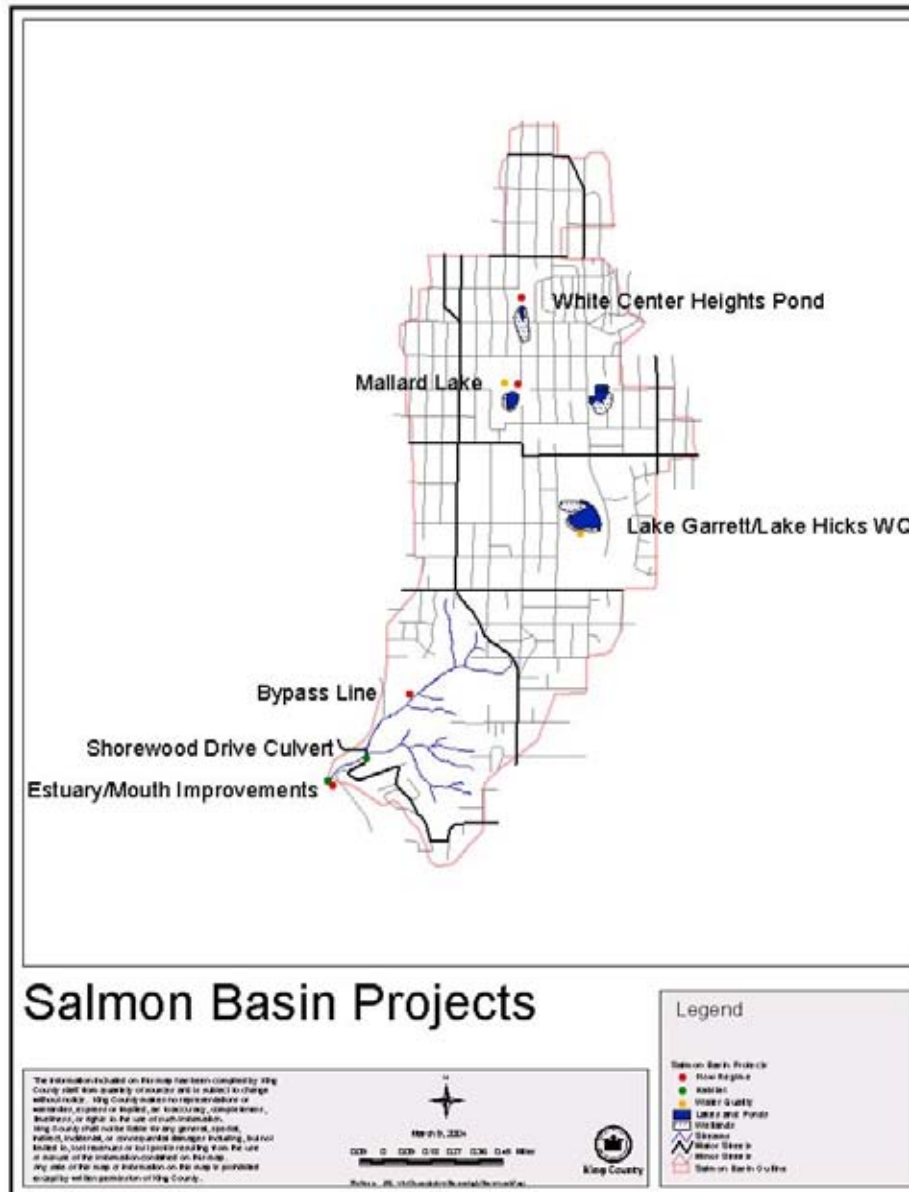
Problem	Option	Pros	Cons	Public Cost
<u>Flow regime</u> Need to ensure that stream remains protected with by-pass; upper watershed flooding and conveyance issues need to be addressed	<u>Regulations only</u> Level 1 detention standard	<ul style="list-style-type: none"> <li>• <b>Meets goal flow for basin</b></li> <li>• Will protect conveyance system and maximize benefit of existing by-pass line</li> <li>• Less costly for developers</li> </ul>	<ul style="list-style-type: none"> <li>• Does not effectively address existing flooding and conveyance problems in the upper watershed</li> </ul>	\$0
	<u>Detention facilities and regulations</u> <ul style="list-style-type: none"> <li>• Examine existing by-pass line to assess condition</li> <li>• Modify by-pass outfall to address broken manhole</li> <li>• Reduce flooding at Mallard Lake with property purchase and drainage improvements</li> <li>• White Center Regional Pond drainage improvements</li> </ul>	<ul style="list-style-type: none"> <li>• All of the advantages listed above plus will address existing flooding and conveyance problems in upper watershed</li> </ul>	<ul style="list-style-type: none"> <li>• Cost is relatively high to address flooding problems in small area</li> </ul>	Examine by-pass -- \$2000 Modify by-pass outfall -- \$50,000 Mallard Lake -- \$750,000 White Center Regional Pond -- \$150,000  Total -- \$952,000

# Salmon Creek Water Quality Technical Options

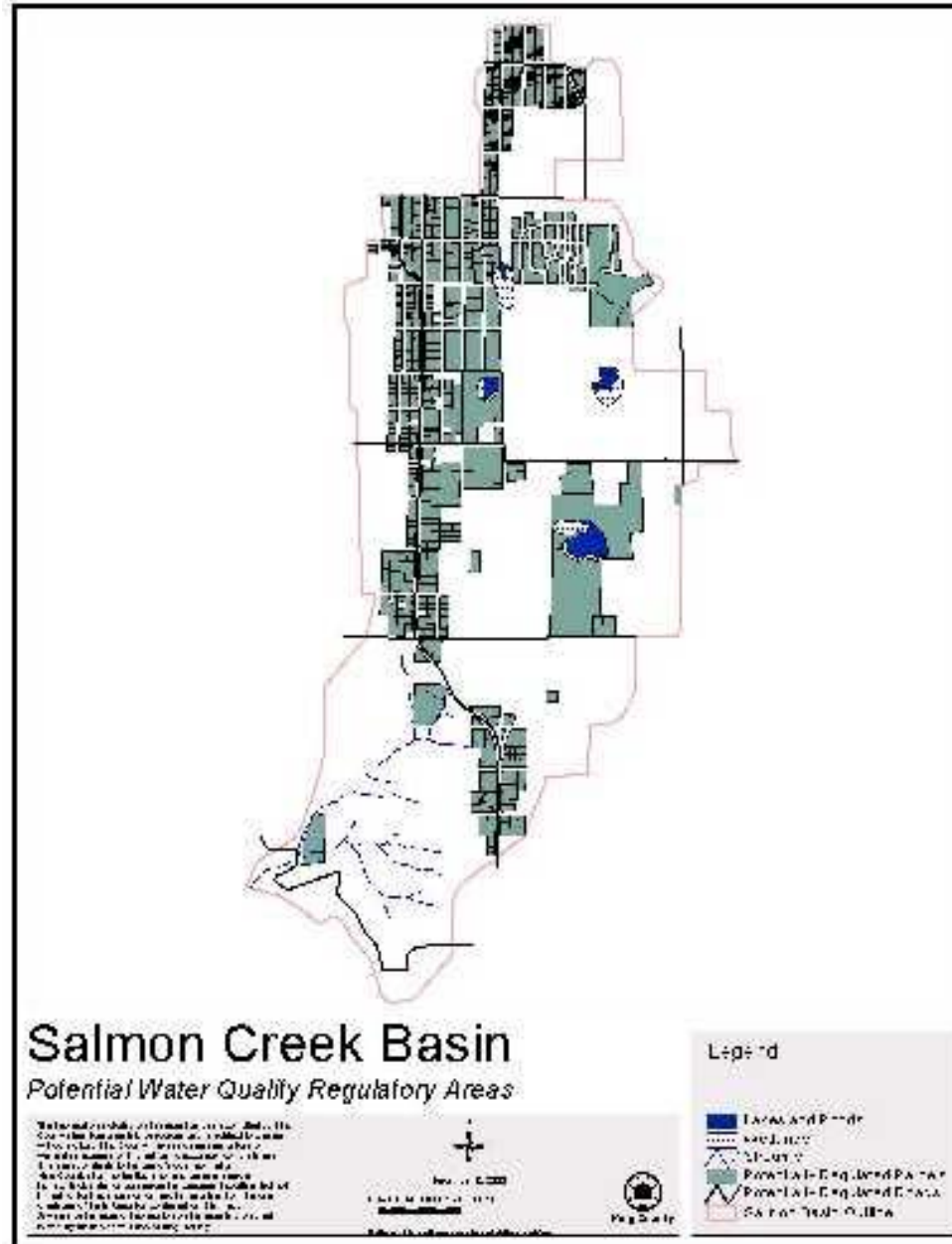
Problem	Option	Pros	Cons	Public Cost
<b>Water quality</b> Need to improve water quality to meet Clean Water Act requirements; Lake Hicks is listed as impaired due to high concentrations of phosphorus and fecal coliform bacteria	<u>Regulations only</u> Require new development and re-development to provide enhanced treatment for high-impact land uses, may also have lake protection standard for Lake Hicks	<ul style="list-style-type: none"> <li>Will remove not only 80% TSS but also 50% of dissolved metals, a primary pollutant in the basin</li> <li>Will require additional phosphorus control</li> </ul>	<ul style="list-style-type: none"> <li>Treatment will only be provided as development and re-development occurs, will likely take a long time</li> </ul>	\$0
	<u>Mallard Lake –</u> plantings to reduce use by ducks and geese, posted fecal coliform levels, water quality treatment facility	<ul style="list-style-type: none"> <li>Will address some of the existing fecal coliform problems</li> <li>Will provide a regular update to citizens regarding wq</li> </ul>	<ul style="list-style-type: none"> <li>Citizens near lake may like lots of ducks and geese</li> </ul>	\$150,000
	<u>Lake Hicks –</u> Alum treatment to prevent algal blooms due to excess phosphorus inputs to lake	<ul style="list-style-type: none"> <li>Will reduce phosphorus level in the lake</li> </ul>	<ul style="list-style-type: none"> <li>Alum needs to be re-applied every several years</li> <li>Alum won't address high fecal coliform counts</li> </ul>	\$150,000 initially, \$50,000 every 3 years or so
	<u>Future retrofits identified through monitoring</u>	<ul style="list-style-type: none"> <li>Specific projects can be designed to treat specific areas of need</li> </ul>	<ul style="list-style-type: none"> <li>Need to wait for data analysis</li> <li>Need to continue to fund monitoring</li> </ul>	\$?



# Potential Salmon Creek Basin Projects



# Parcels Likely to Implement Enhanced Water Quality Treatment



# Salmon Creek Habitat Management Technical Options

Problem	Option	Pros	Cons	Public Cost
<u>Habitat management</u> Need to protect existing areas of good habitat and restore degraded areas	Estuary restoration	<ul style="list-style-type: none"> <li>• Could create habitat that is very limited in Puget Sound</li> <li>• Would benefit fish, amphibians, and birds</li> </ul>	<ul style="list-style-type: none"> <li>• Property owner has not expressed interest in the past</li> <li>• Limited fisheries potential relative to high cost</li> </ul>	\$4,000,000
	Replace culvert under Shorewood Drive	<ul style="list-style-type: none"> <li>• Would allow fish passage into relatively good habitat areas upstream</li> </ul>	<ul style="list-style-type: none"> <li>• Of limited value without estuary project</li> <li>• Limited fisheries potential relative to high cost</li> </ul>	\$375,000
	Purchase property or conservation easements whenever possible	<ul style="list-style-type: none"> <li>• Will provide habitat and allow options for future management strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Jurisdictions have limited funds</li> <li>• Often difficult to convince elected officials of importance of preservation</li> </ul>	Variable

# Salmon Creek Monitoring & Stewardship Technical Options

Problem	Option	Pros	Cons	Public Cost
<p>Monitoring and <u>stewardship</u> Need to gather basic information to develop management strategies and assess effectiveness; need to involve public by providing good information and offering options for local involvement</p>	<p><u>Flow, water quality, and habitat monitoring</u> Establish an on-going environmental monitoring program to collect basic hydrologic information (precipitation and stream flow), water quality data (temp, DO, hardness, fecals, nutrients, metals), and habitat data (fish counts, B-IBI)</p>	<ul style="list-style-type: none"> <li>• Will allow evaluation of effectiveness of regulations, capital projects, and operations and maintenance practices</li> <li>• Only way to be able to tell if stream is improving or not</li> </ul>	<ul style="list-style-type: none"> <li>• Requires on-going financial commitment</li> <li>• Often difficult to convince elected officials of its importance</li> </ul>	\$25,000 Annual Cost
	<p><u>Basin stewardship</u> Fund a quarter-time position to coordinate public outreach and information, including an annual report on basin condition and coordination of volunteer activities</p>	<ul style="list-style-type: none"> <li>• Offers one-stop shopping for citizens interested in the health of the basin</li> <li>• Serves as a point of coordination within and between agencies</li> <li>• Provides good public relations</li> </ul>	<ul style="list-style-type: none"> <li>• Requires on-going financial commitment</li> <li>• Often difficult to convince elected officials of its importance</li> <li>• Potential to cause conflict between jurisdictions because must be advocate for stream, not employers</li> </ul>	\$25,000 Annual Cost

# Questions to consider

- Given that no fish have been seen for approximately 20 years, how important is it to attempt to restore fish runs in Salmon Creek?
- If ten times the number of salmon could be restored to Miller and Walker Creek for one-half the cost, does it make sense to worry about Salmon Creek?

# Questions to consider

- What should the ultimate restoration goal be for Lake Hicks? Fishing? Swimming?
- What do you think are the relative priorities of all of the projects suggested?
- How much additional funding are you willing to provide through increases in taxes and fees?